

Flight

A Journal devoted to the Interests, Practice, and Progress of
Aerial Locomotion and Transport.

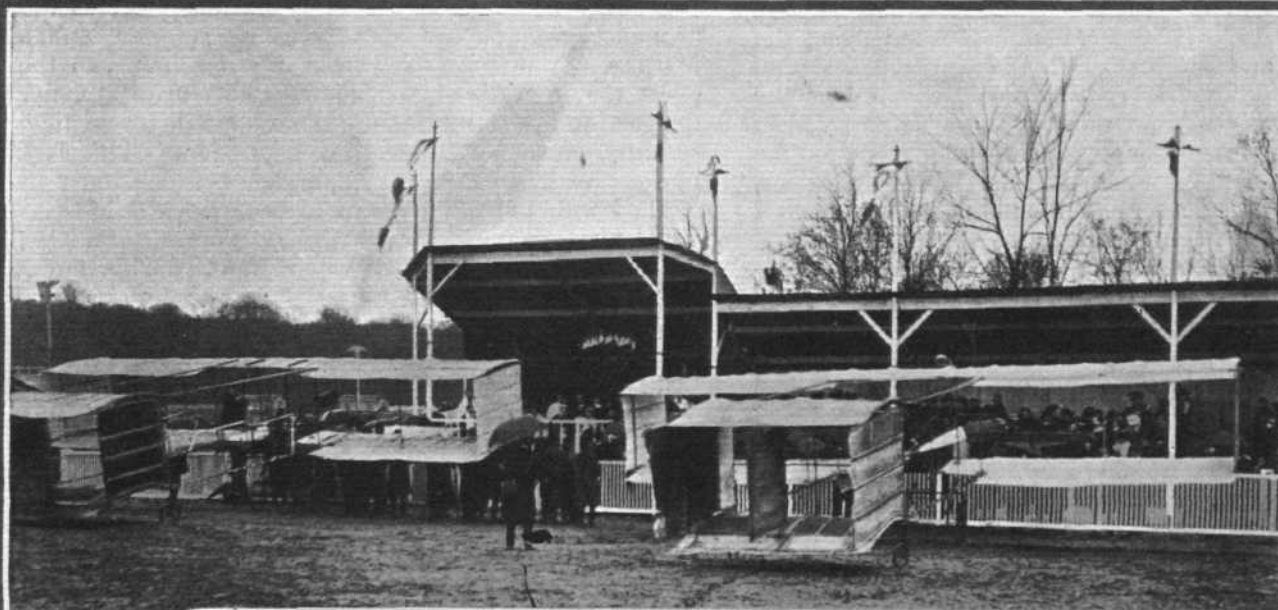
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The remarkable custom which pertains in France of invoking the blessing of the Church upon motor cars, aerodromes, flyers, and such like goods and chattels, was referred to in FLIGHT last week. A couple of interesting photographs are given above of the ceremony of blessing the new Aerodrome at Juvisy by the Archbishop of Paris, and incidentally of a couple of aeroplanes, respectively named "Ile de France" and "Alsace," which were brought forward to receive a share of the Episcopal favour.

THE MANSION HOUSE MEETING AND ITS LESSONS.

THE meeting of the Aerial League of the British Empire at the Mansion House on Monday, over which the Lord Mayor presided, was in the nature of a historic function. It witnessed the first official recognition that the City of London has accorded to the importance of the subject of human flight from the national point of view. The Lord Mayor observed that Britain was justly proud of having taught other nations how best to navigate the sea and how to build the best ships; consequently he hoped that we would not be behind in the matter of navigating the air. It has been said that it would be a very good thing for us if we woke up one fine morning to find a huge dirigible floating over Mansion House Place. The Chief Magistrate of the City of London, however, made it quite plain that the only airship he would like to see floating over his official residence was one flying the Union Jack and one capable of beating the best that could be built abroad. While admitting that if dynamite were to be dropped from the clouds on to warships in addition to attacks from torpedoes, submarines and the rest, life in the navy would become rather precarious, Admiral Sir Percy Scott pointed out that he had spent a large proportion of his time in considering ways and means rather of destroying aerial craft than of constructing them, with the result that there had been got out a design of gun which should prove pretty formidable in daytime. But we have to reckon with darkness, and, with characteristic humour, he observed that he had never met the gunner who could teach a man how to hit an object that he could not see. Thus the only satisfactory method of defence against attacks from aerial craft is to be found, in the view of the gallant Admiral, in the possession of flying machines, and in that connection he revealed himself a staunch believer in the establishment by Britain of a two-power standard in airships. He concluded by observing that the Colonies were offering us Dreadnoughts, but that we must supply ourselves with airships.

That point is one well worth pondering, particularly in view of some words that fell from Colonel Templer, late of the Balloon Department at Aldershot, and of the purposes for which the Aerial League has been established.

He suggested that the citizens of London should raise money, and ask the Aerial League to construct an airship with the funds for presentation to the nation. We contend that for the Aerial League of the British Empire either to accept such an office, or to raise moneys from among its own members for the purpose of presenting an aerial vessel to the Empire, is diametrically opposed to the fundamental principles of its establishment. It is not a society for relieving the Government of one farthing of its due financial responsibilities. To the contrary, if it is to do any useful work at all, it must be wholly in the direction of keeping the Chancellor of the Exchequer, the Admiralty, and the War Office alive to the necessity of furnishing the country with the best possible equipment for aerial warfare. The two lines of conduct are not compatible; hence it will be necessary for the Aerial League to make a very clear statement of its policy in this connection at an early date. At the moment we do not consider that the remarks of Colonel Templer, though made at a meeting of the Aerial League, are in any form expressions of the policy of that body.

It would be almost as absurd for the Navy League to build Dreadnoughts for presentation to the Admiralty, with a view to enabling the Chancellor of the Exchequer to make a popular Budget statement, as it would be to attempt to awaken the Government to the necessity for providing funds for experimental and constructional work in connection with the evolution of an aerial fleet, by setting about deliberately to relieve it of responsibility in the matter. As Prince Louis of Battenberg wrote in a letter that was read out at the meeting: "It is time we woke up, seeing what is being done on the Continent." In the words of Lord Curzon: "To a country possessing a maritime frontier, the question of aerial navigation is of the utmost importance."

Another matter brought out at the meeting was the assurance given, in his official capacity, by Mr. Stephen Marples, one of the Honorary Secretaries, firstly, to the effect that the Aerial League was not a rival to, nor designed to usurp the promise of any existing scientific, sporting, or social aeronautical institution. This is a pledge worthy to be recorded, and one which must be fulfilled with the utmost scrupulousness. Mr. Marples also laid stress on the fact that the League was "not an association of scaremongers." The moderate tone that characterised the bulk of the speakings was no less commendable than helpful; but towards the end of the meeting there were uttered by one speaker some remarks that came perilously near the tone of the "scaremongers." Tendencies of this sort must be suppressed with unhesitating promptitude and firmness. The gospel of sensationalism should be shunned by the League even as men shun the plague.

"Money, skill, experience, and room" are the four requisites laid down by Sir Hiram Maxim as being essential to the achievement of success in flight. Professor Hele-Shaw pointed out that the development of land and water travel had been through the peaceful courses of commerce; whereas, he ventured the opinion that the purposes of war would be the cause of the most practical and prompt evolution of machines for aerial locomotion. Moreover, development in that direction must be a State matter. That public opinion can be educated and organised in the direction of rousing whatever Government chances to be in power in these Islands to a realisation of the need that exists for Britain to be possessed of a finer equipment of flying machines than the best that can be done abroad was evidenced by the number of people who attended Monday's meeting at the Mansion House. The Lord Mayor said that it was the largest assemblage that he had seen in that hall for a matter of five years past. That is distinctly encouraging. The Aerial League of the British Empire is to be heartily congratulated on having made such an auspicious initial public effort, and it should take courage by likening its present proportions to what Milton styled "the baby figures of the giant things to come." There is such an amount of useful work for such a body to do that it will be very strange if it finds time to exploit any undesirable policies. More than that cannot be said at the moment, for it is now for the Aerial League of the British Empire to prove by the nature of its works that it is in every sense of the term a worthy companion to the splendid Navy League that has become a national institution.

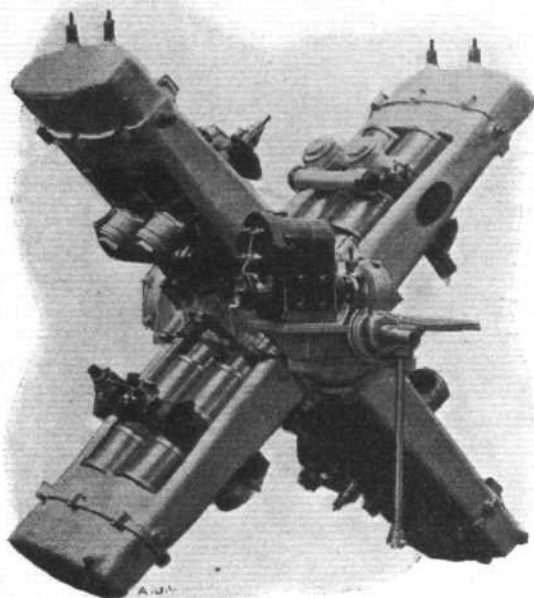
LEADING AERO-MOTORS AT OLYMPIA.

(Concluded from page 197.)

Gobron-Brillie (GOBRON-BRILLIE AGENCY).

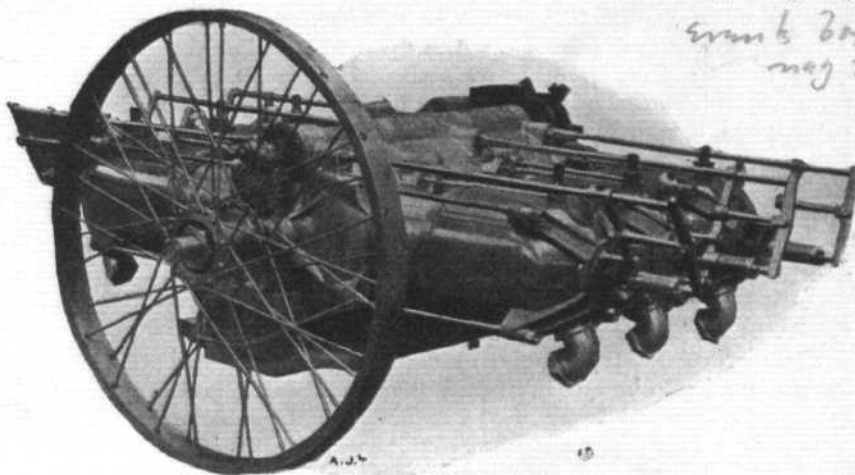
Modified radial engine in X form having eight cylinders arranged in pairs. In each cylinder are two

culating-pump are mounted on opposite ends of a transverse-shaft, which is driven by exposed bevel-gearing through a crank-shaft. In the case of the A type engines,



"Flight" Copyright Photo.

Gobron X Engine.—This has 8 cyls., each containing two pistons working in opposite directions.



"Flight" Copyright Photo.

DUTHEIL-CHALMERS HORIZONTAL ENGINE.—The cylinders are opposed, but the pistons of opposite cylinders are connected to separate cranks set 180 degrees apart. The water-jackets are made of copper, and the inlet-valves are of the atmospheric type.

pistons arranged on the standard Gobron-Brillie principle. The two pistons move in opposite directions, and whilst one is coupled up to the crank-shaft in the usual way, the other is coupled up to a beam which carries a pair of external connecting-rods. These latter and the beam are enclosed in an aluminium casing which is bolted to the crank-chamber. The valves are, of course, set in the centre of the cylinders so as to feed the mixture into the combustion space between the two pistons. A special feature of the valve mechanism on the Gobron aero-motor is the operation of the exhaust-valves from a single cam-plate which works in conjunction with a set of four rock-shafts. Each rock-shaft controls a pair of exhaust-valves, and the inlet-valves are atmospheric. The cylinders are water-jacketed, the jackets being formed of brass. Forced lubrication is provided and the engine is fitted with two magnetos and two carburettors.

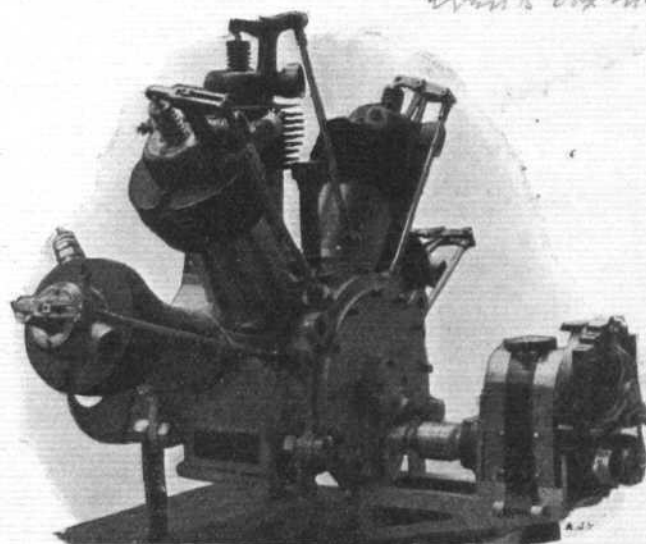
Dutheil-Chalmers (CAPT. WINDHAM).

Horizontal engine with opposed cylinders made in three models with 2, 4, and 6-cylinders, and in two types of which type A has a single crank-shaft between the cylinders, whilst type B has two crank-shafts with the cylinders between them. In the latter case the cylinders are combined in pairs, so that each contains two pistons moving in opposite directions simultaneously. The cylinders are cast separately, and have copper water-jackets fastened at the bottom by a marine type stuffing-box, and at the top by yokes, which are held in place by long bolts passed through the crank-chamber from one cylinder-head to another. Atmospheric-inlet valves are employed, and the exhaust-valves are placed in the cylinder-heads, where they are operated by an overhead rock-shaft from a central cam-shaft, which is driven by exposed gearing. The magneto and the cir-

the opposed cylinders are not exactly in line with one another, and their pistons are coupled up to cranks which are 180° apart. There is a bearing for each pair of cranks, and adjacent pairs are, of course, placed 120° apart.

R.E.P. (BESSLER, WAECHTER, AND CO.).

Semi-radial engine, that is to say, the cylinders project from the upper part of the crank-chamber only, although each is still radial to the axis of the crank-shaft. There are three models—all of which have the same cylinder dimensions—having 5, 7, and 10 cylinders respectively. In the 5 and 7-cylinder engines the cylinders are arranged in two planes, the cylinders being staggered as if they had



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R.E.P. AERO-MOTOR.—General view, showing how the five cylinders are all arranged above the crank-shaft (semi-radial).

originally been radial below the crank-shaft and had been folded up into their present "semi-radial" position. The 10-cylinder engine is virtually two 5-cylinder engines

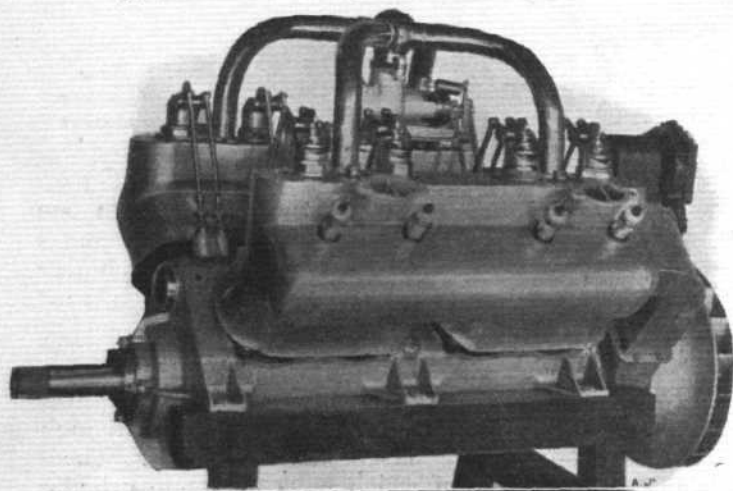
placed end to end, which fact is further emphasised by the provision of separate valve mechanisms for each half.

It will be noticed that except in the case of the 10-cylinder engine which, as we have just explained, really consists of two 5-cylinder engines, the Rep principle involves an uneven number of cylinders. The reason for this is because with an uneven number of cylinders radially arranged it is possible to maintain an equal angular period between the explosions. Thus the cylinders fire in the order 1, 3, 5, 7, 2, 4, 6, 1, &c., whereas, with an even number of cylinders, the even spacing could not be carried out, except by making the cylinders fire in direct sequence, 1, 2, 3, &c., which would hardly be desirable from other points of view.

A constructional detail of considerable interest on the Rep engine is the combined inlet and exhaust-valve which we described in FLIGHT on January 23rd, 1909.

Pipe (LONDON MOTOR GARAGE).

Eight-cylinder V-type engine air-cooled by a centrifugal fan mounted on one end of the crank-shaft where it is so

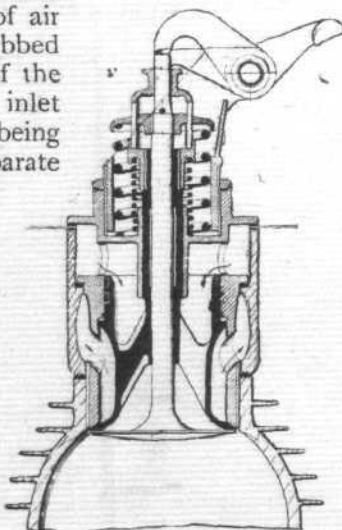


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PIPE AERO-MOTOR.—The cylinders are enclosed in cowls through which a stream of air is drawn for cooling by a centrifugal fan mounted on the end of the crank-shaft.

arranged as to suck a stream of air through cowls placed over the ribbed cylinders. A special feature of the engine is the use of combined inlet and exhaust-valves, both valves being mechanically operated by separate push-rods in much the usual way. There is one carburettor and only one magneto.

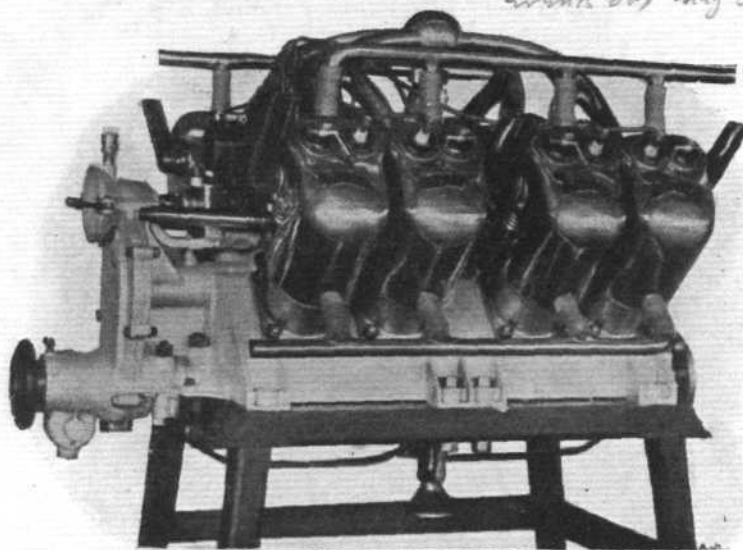
An accompanying sectional drawing shows the design of the valves, and from this it will be noticed that the inlet-valve is of the usual mushroom type, and that the mixture passes through the centre of the exhaust-valve on its way to the cylinder. The crank-shaft is supported on three ball-bearings, and ball-bearings are also employed for the support of the cam-shaft.



Pipe Aero-Engine.—Sectional drawing, showing the combined inlet and exhaust-valves, which are independently operated by separate rock-levers. The exhaust-valve is shown in solid black section.

E.N.V. (LONDON AND PARISIAN MOTOR CO.).

Eight-cylinder V-type engine with electrolytically-deposited copper jackets, a feature of which is the special design of corrugated-joint between the bottom of the jacket and the cylinder casting. Although quite simple in itself, the makers place great importance on this particular detail,

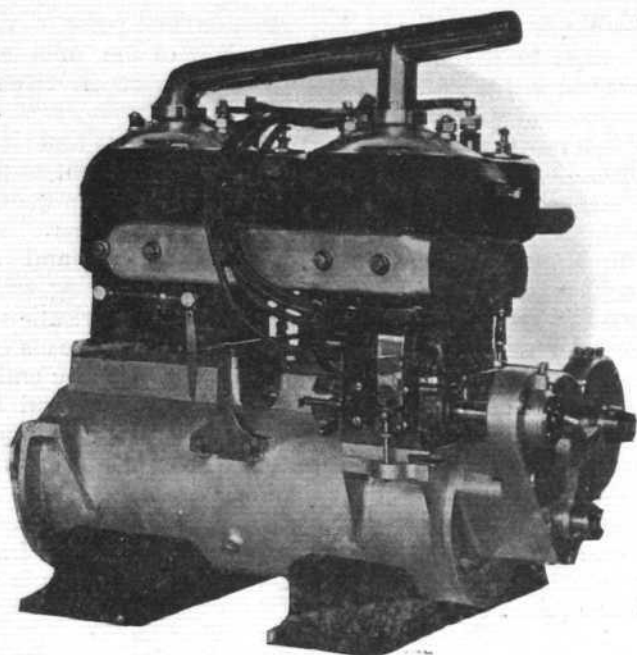


E.N.V. AERO-MOTOR.—The cylinders have electrolytically-deposited copper water-jackets. On the extreme left of the above view is seen a hand wheel for altering the setting of the camshaft.

as they have found that it ensures immunity against troubles associated with expansion and contraction. The valves are arranged side by side, and are mechanically operated from a central cam-shaft. The induction-pipes are fed through a centrally-arranged carburettor, and the exhaust discharges through separate short pipes into the atmosphere. Lubrication is effected by a plunger-pump worked off an eccentric on the crank-shaft, and oil is delivered under pressure to the main-bearings where, entering the hollow crank shaft, it also feeds the big-ends, and is led up the gudgeon-pins. A special feature of the design is the use of a hand adjustment for altering the setting of the crank-shaft as a means of obtaining variable power. The workmanship of the E.N.V., which is a newcomer among petrol motors in this country, gives every evidence of high-class construction, and the fact that Mr. Moore-Brabazon is at present using this motor on his own flyer is in itself a good testimonial.

Vivinus (ERADE AND VAN TOLL).

Four-cylinder vertical engine of orthodox type, evolved from the Vivinus experience with motor car engines but with special attention to the lightening of the parts. In the most powerful model the power developed is 75-h.p., and the weight is, on account of the use of aluminium water-jackets, less than the weight of the 60-h.p. engine. A special feature in the design is the enclosing of the cam-shaft in a separate casing, which can be entirely dismantled from the crank-chamber to the outside of which it is bolted. The crank-chamber itself is a one-piece aluminium casting, fitted with aluminium end-plates for the support of the bearings. Inspection-covers are fitted to the bottom of the crank-chamber through which the big-ends can be uncoupled from the crank-shaft to enable the latter member to be withdrawn from one end. The central bearing of the crank-chamber is released by undoing a couple of set screws which secure it in place. It was with a 50-h.p. Vivinus engine that Mr. Moore-

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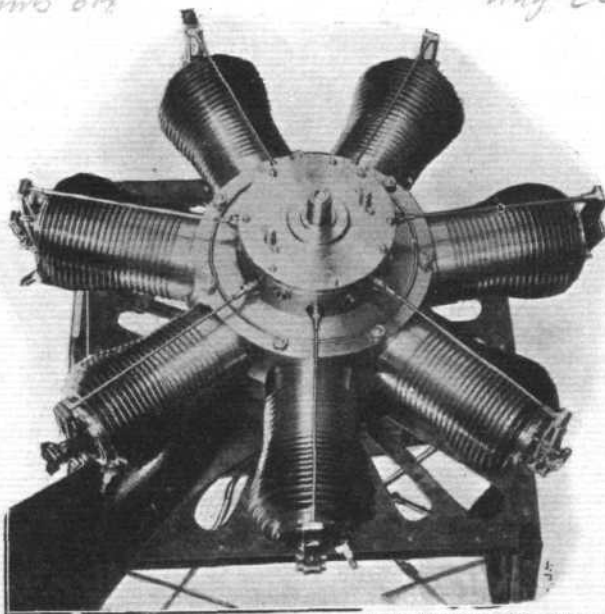
"Flight" Copyright Photo.

VIVINUS AERO-MOTOR.—The crank-chamber is a cylindrical one-piece aluminium casting, and the crank-shaft is withdrawn by removing the end-plates which support it.

Brabazon's flyer was equipped when he made three successive flights, of from 500 to 600 metres in length, on December 3rd, 1908, at Issy, and Mr. Henry Farman is, we are informed, having one of these motors for his new machine.

Gnome (GAUTHIER AND CO.).

Rotary engine, with seven cylinders, constructed of steel, and mounted in a special manner on a steel ring which is faced with steel plates on both sides to form a crank-chamber. The carburettor, which is, of course,

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GNOME ROTARY ENGINE.—The cylinders rotate bodily with their crank-chamber about a fixed crank-shaft. All the pistons are coupled to the same crank.

stationary and external, feeds through the hollow crank-shaft to the crank-chamber, from which the mixture enters the next working cylinder during its suction stroke through an atmospheric valve in the piston-head. The exhaust-valves, which are situated in the cylinder-

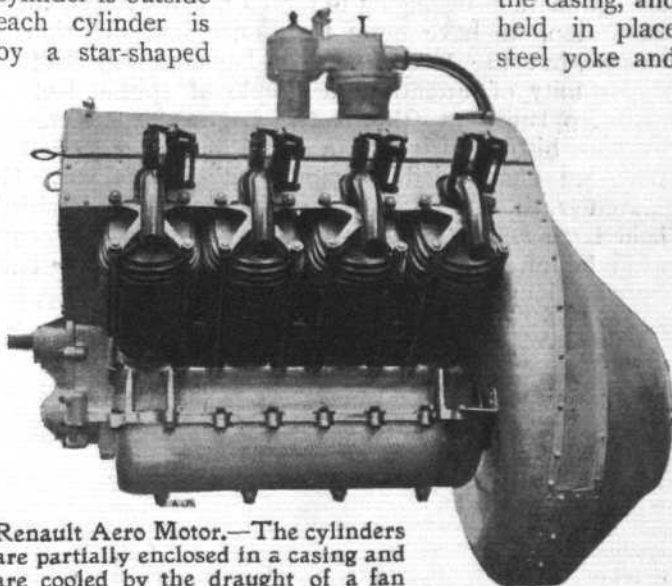
heads, are each operated by a separate cam-ring, and the exhaust escapes direct into the atmosphere over the inlet-valve mechanism.

The Gnome engine is an example of the pure radial design, inasmuch as the cylinders are placed equidistantly round the crank-chamber, and all lie in the same plane. Their pistons are therefore coupled up to the same stationary crank.

On the other hand, the valve mechanism requires the cams which operate the tappet-rods to be arranged on different planes, and another important detail is that the rotary motion of the cylinders necessitates the accurate balancing of the rock-levers by means of which the tappet-rods communicate their motion to the valves. It will be noticed that the engine is constructed with an uneven number of cylinders, the reason for which is that the firing order may be maintained through equal angular intervals without resorting to direct sequence, as would be necessary with an even number of cylinders.

Renault (RENAULT FRÈRES).

Eight-cylinder V-type engine, partially enclosed in an aluminium box so that a centrifugal fan can draw a continuous stream of air across the ribbed cylinders. The cylinders are cast separately and are ribbed circumferentially in the usual way. The greater part of the cylinder is outside the casing, and each cylinder is held in place by a star-shaped steel yoke and

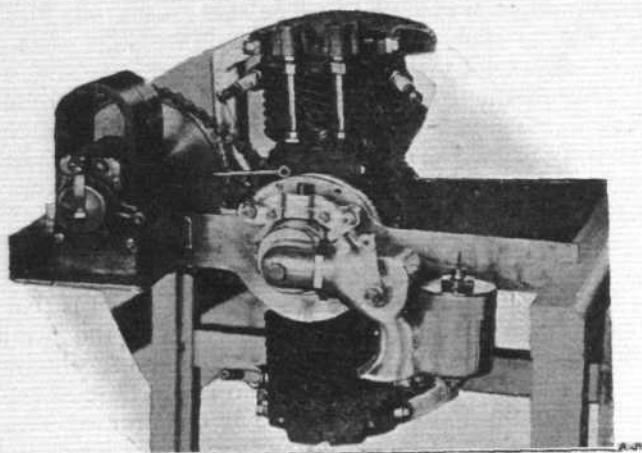


Renault Aero Motor.—The cylinders are partially enclosed in a casing and are cooled by the draught of a fan mounted on the fly-wheel.

four long bolts; the air space between the lower ends of the cylinder-casing, which are not ribbed, is blocked by a baffle-plate so as to enhance the cooling effect of the upper part. The exhaust-valves are placed immediately above the inlet-valves and both are mechanically operated. The ignition-plugs project from the sides of the valve-chambers and are thus enclosed inside the casing, which also encloses the high-tension magneto and the induction-pipe. Lubrication and carburation are carried out on the same lines as on the Renault car engine, and the workmanship, needless to say, has every appearance of being of the same high standard.

The International Rotary Motor (INTERNATIONAL ROTARY MOTORS, LTD.).

Rotary engine with opposed cylinders; in all sizes the cylinders are in the same plane. In one type the crank-shaft is stationary, and in another carries a flywheel, so that it rotates in the opposite direction, and thus reduces the speed of each member by 50 per cent. A special



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INTERNATIONAL ROTARY MOTOR.—The cylinders are opposed and rotate about a crank-shaft which may be either fixed or allowed to rotate in the opposite direction. Both valves in each cylinder are mechanically operated by a transverse-skew gear-driven cam-shaft.



TEACHING THE YOUNG IDEA.

THAT engineering students of the Regent Street Polytechnic are fortunate in belonging to such a progressively-minded institution, we have more than once had occasion to remark, but the fact that they have already had an opportunity of attending a couple of special lectures on aeroplanes at this early stage of the world's aviation history, is indeed a signal instance of the way they are encouraged to move with the times. On March 24th and March 31st M. L. Blin Desbleds held large and attentive audiences in a state of interest while he introduced them to the study of flight. They were not long, these lectures, nor were they too deep, but



AERIAL FLIGHT IN THEORY AND PRACTICE.

A COURSE of two lectures bearing the above title was delivered at the Royal Institution, on Thursdays, 25th March and 1st April, by Professor G. H. Bryan, Sc.D., F.R.S. The first lecture, which was mainly historical, dealt with the evolution of the modern aeroplane and dirigible, and was illustrated by a large number of diagrams of machines that had been designed or constructed from the earliest times to the present day. The second lecture, which was mainly theoretical, was divided into two parts. In the first, the lecturer dealt with the laws of fluid resistance, and pointed out the difficulties of founding these laws on hydro-dynamical theory, in consequence of the formation of eddies in the wake of bodies moving through air or water. A new method had, however, been adopted by Mr. W. E. Williams for studying the matter experimentally, and a number of photographs were shown on the screen, showing the paths of the fluid particles due to the motion of spheres and planes. In these, the eddies were well shown, and the effects of varying the velocity of the moving body were illustrated. As, however, the experiments are still in progress, no definite conclusions were put forward regarding the latter influence.

The second part dealt exclusively with the stability of aeroplanes, a subject to which Professor Bryan has devoted his attention for a considerable time, though the investigations are still far from complete. Dealing with longitudinal stability, it was pointed out that an aeroplane machine possessed a long and a short pitching motion, both of which led to different conditions for stability. In the case of a single broad aeroplane, one necessary condition was that the centre of pressure should move forward as the inclination decreased. This was not, however, a sufficient condition of stability. In the case of aerocurves, when the inclination was less than a certain limit, the reverse effect took place, and the machine became unstable. This reversal had been mentioned years ago in a paper by Mr. Wilbur Wright, and it was not improbably the cause of Lilienthal's death. The lecturer called

feature of the engine from a constructional point of view consists in the mechanical operation of the inlet and exhaust-valves by means of a set of skew gear-driven cam-shafts.

There is a cam-shaft for each cylinder, and it is placed transversely to the axis of the crank-shaft, so that the skew gear-pinion which it carries can run in contact with the skew gear-wheel on the latter member. The valves are of the inverted mushroom type, and are mounted without springs, centrifugal force being relied upon to keep them on their seats. The lubrication is forced, and magneto ignition is arranged by means of a chain-drive. The carburettor feeds through one end of the hollow crank-shaft into the crank-chamber, and the mixture is forced out of the crank-chambers by the pump action of the descending piston, through an external induction-pipe into the combustion-chamber of the opposite cylinder. This period of the cycle is somewhat suggestive of the two-stroke cycle, but the International Rotary motor has the more usual cycle of four strokes.

certainly they were delivered in the right key, one well calculated to arouse the enthusiasm which might result in many of those who listened making further investigations of their own. In emphasising the advantages possessed by young engineers with a scientific and mathematical training when tackling a subject like flight at this early stage of the movement, M. Desbleds gave them a practical suggestion of his own to work upon, which was to the effect that elliptical or semi-elliptical planes might prove more efficient than those of rectangular form. At both lectures the cinematograph was used to portray the practical state of the art at the present time.

attention to Mr. Turnbull's recent experiments, which showed that the reversal in question could be obviated, and greater stability obtained in consequence, by the use of doubly-curved surfaces. At the same time the stability of broad surfaces necessarily depended on certain data, for which the name "capsizing coefficients" was suggested, and regarding which we had no experimental information whatever. This point was illustrated by diagrams showing exactly what was wanted, and how the necessary experiments could be easily performed. In the meanwhile the lecturer had been turning his attention to the stability of machines built of narrow planes. Such a machine would not be stable if the front and rear planes were parallel, but this difficulty could be got over by slightly inclining the planes, the effect of the change on the stability being illustrated by diagrams. There were, however, further conditions to be satisfied before the machine was longitudinally stable, and these conditions were at present under investigation. The existence of the double-pitching motion has been verified experimentally by Mr. W. E. Williams, whose photographs were thrown on the screen. The present investigation was more exhaustive and rigorous than Mr. Lanchester's method. The lecturer had just begun to examine the problem of transverse stability, and a slide was shown on the screen, showing the dangers which might arise if the necessary conditions were not satisfied. The lecturer, in conclusion, expressed the opinion that it was possible to construct a machine possessing automatic stability, both longitudinal and transversal, without the aid of gyrostats, or movable planes, or anything else which would introduce additional complications into the problem. On the other hand, an examination of recent machines, both at Olympia and in diagrams, suggested that many of them were lacking in stability. The wonder was not that aerial navigation was difficult, but that it was so easy that long flights had been successfully performed on aeroplane machines which were, beyond doubt, unstable.

FLIGHT AT THE MANSION HOUSE.

CONSIDERABLE success attended a meeting which was held at the Mansion House on Monday last, under the auspices of the Aerial League, to consider the position of Great Britain as regards aeronautics, especially, of course, from a national defence point of view. The Lord Mayor presided and there was a very large attendance, while among the speakers were Lord Montagu, Admiral Sir Percy Scott, Dr. Hele-Shaw, Major Baden-Powell, Col. Templer, and Sir Hiram Maxim.

The Lord Mayor, in opening the meeting, confessed that he had been doubtful at first as to the value of airships, but wonderful things were happening every day, and Britannia must be mistress of the air even as of the sea.

Mr. Stephen Marples, the hon. secretary of the League, then read letters from Vice-Admiral H.S.H. Prince Louis of Battenberg, Lord Charles Beresford, Viscount Curzon, and others, regretting their inability to be present, but expressing sympathy. Lord Curzon's letter pointed out that, to a country possessing a maritime frontier, the navigation of the air must be attended with vital significance. Mr. Marples explained the position of the League and its methods of work, and concluded that to think Imperially we must begin to think aurally.

Lord Montagu of Beaulieu moved the following resolution:—"That this meeting of the citizens of London, held at the Mansion House, regards with considerable anxiety the rapid development of the science and practice of aerial navigation by other nations, and deploras the backwardness and apathy shown by this country regarding this new means of communication, which is of vital importance from a commercial as well as from a national defence point of view; and pledges itself heartily to support the object of the Aerial League of the British Empire."

He was convinced, he said, that unless public opinion was roused we should bitterly regret a few years hence

that we had not taken measures to provide ourselves with aerial weapons of defence. Very few people realised that within five years the insularity of our country might be destroyed. Two big Powers were building dirigibles and experimenting with aeroplanes solely for war purposes. That was a serious situation. We were on the threshold of great changes in the method of warfare, and unless the country did wake up it might be in considerable danger in a very short time.

Admiral Sir Percy Scott, in seconding the resolution, said the British Nation should at once proceed to form a two-power standard in airships. He also stated that he had designed a gun for use against airships, which, if it could be laid well, would play "Old Harry" with airships at a distance of 6,000 ft. These airships would come over in the dark, and it would therefore be impossible to see them, so that it would be necessary to meet flying machines with flying machines. He thought a national aerial defence fund would render real aid to the country.

Dr. Hele-Shaw said there was a great future for the League in educating the public to aeronautics, and Major Baden-Powell lamented the lack of encouragement to invention in the way of prizes, and thought the offer of a prize of £1,000 for the first machine to fly a mile would prove a great incentive to progress.

Colonel Templer suggested that a fund should be started privately, to construct a dirigible which could then be presented to the Government.

Sir Hiram Maxim referred to the results he had obtained in his own experiments, and said that he thought, at the present rate of progress, we should certainly have, a few years hence, machines capable of travelling at sixty miles an hour, and carrying a load of 1,500 lbs.

The resolution was carried unanimously, and a vote of thanks to the Lord Mayor for presiding was passed, on the proposition of Admiral Sir G. Fremantle, seconded by Colonel H. S. Massy.

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AERO CLUB OF THE UNITED KINGDOM.

OFFICIAL NOTICES TO MEMBERS.

A meeting of the Committee was held on Tuesday, 6th inst., at 166, Piccadilly, W., when there were present: Mr. Roger W. Wallace, K.C., in the chair, Mr. Griffith Brewer, Mr. Ernest C. Bucknall, Mr. Martin Dale, the Earl of Hardwicke, Mr. V. Ker-Seymer, Mr. C. F. Pollock, Mr. Stanley Spooner, H. E. Perrin (Sec.).

At the conclusion of the Directors Meeting, Mr. Roger W. Wallace, K.C., was unanimously elected Chairman of the Club for the ensuing year.

New Members.

The following new Members were elected:—

L. S. Amery.	Hon. Mrs. Walter Paton.
T. Barclay.	Frank Spencer.
Mrs. M. Bruce-Williams.	

New Aero Club Prizes.

The Committee of the Aero Club have decided to offer prizes for short flights made by flying machines at their grounds at Shellbeach.

Four prizes of £25 each will be given for the first four flights of 250 yards.

Three prizes of £50 each for the first three flights of 1 mile in a closed circuit.

British Michelin Cup.

The rules governing the competition for the Trophy offered by the Michelin Tyre Co. are now practically complete, and they will be published shortly. Entries will be received on and after May 1st. The competition is open to British subjects manipulating a British-built flying machine, but during the first year the motor may be of foreign manufacture.

Balloon Contests at Hurlingham.

The following dates have been fixed for Balloon Contests at Hurlingham:—

Saturday, May 22nd, 1909: International Balloon Contest.

Wednesday, June 23rd, 1909: Cup presented by the Hon. Mrs. Assheton Harbord.

Saturday, July 10th, 1909: Hedges Butler Challenge Cup.

Saturday, July 17th, 1909: Cup presented by Hon. C. S. Rolls.

HAROLD E. PERRIN, Secretary.

The Aero Club of the United Kingdom,
166, Piccadilly, W.

NEWS OF THE WEEK.

Italy and the Wright Flyer.

PROGRESS in getting Wilbur Wright's flyer into trim at Rome ready for its master has been rapid, and all was practically in readiness last Monday for some exhibition flights by Wilbur Wright before the intensely interested Italian military representatives. Mr. Hart O. Berg had been preparing the way for the advent of Wilbur Wright, who arrived on Thursday of last week, and at once visited Major Morris and Capt. Castagneres, the officers in charge of the aeronautical section of the Engineers. Subsequently an inspection of the arrangements for flying at Centocelle resulted in the approval of the American master. His first Italian pupil will be Signor Calderara, a naval lieutenant.

King Victor Emanuel Receives Wilbur Wright.

LIKE other great rulers, King Victor Emanuel granted Wilbur Wright an audience the day after his arrival in Rome. His Majesty was very keenly interested in all the aviator had to say, the more so as King Victor is unusually conversant with the details of the motor mechanism from his practical experiences when driving his own car. The King has intimated that he will witness some of Wilbur Wright's flights.

Orville and Miss Katherine Wright at the Aero Club de France.

WHILST brother Wilbur is looking after the practical part of the flying business, brother Orville and their sister are doing yeoman service by being entertained by a few of the many who would thus do honour to the Wright family. At the Aero Club de France remarkable enthusiasm was evinced last week, when a banquet was given to the brother and sister, Comte de la Vaulx presiding, amongst the guests being M. Leon Barthou, Professor Charles Richel, and Mr. Frank S. Lahm.

Wrights' Home-coming to be a Gala Day.

IN view of the world-wide fame achieved by the Wright Brothers, especially since Wilbur Wright began his experiments in France, it is hardly to be wondered at that the citizens of their native town are feeling rather proud of them. When they do arrive back in Dayton, the "kings of the air" will find a right royal welcome awaiting them, and arrangements are being made to make the day a gala one.

Jacquelin Ornithoptere.

AT the end of last week a small edition of M. Jacquelin's flying machine arrived at Monaco, where its inventor hopes to demonstrate its practical utility. The wings of this flyer are said to beat at the rate of 6,000 strokes per minute!

The Humphry Aeroplane.

AT the first attempt at flight with his new aeroplane on the Colne, at Wyvenhoe, Mr. Jack Humphry met with a somewhat unfortunate experience. A gust of wind caught the forward elevating plane and caused the machine to tilt backward. This resulted in the boat portion filling with water, and the whole machine sank. When the tide went down it was rescued practically uninjured.

MM. Lambert and Tissandier at Pau.

DAY by day both pupils are "feeling their feet" more and more by short flights at different altitudes, and the practising of turns. Except for the scarcity of machines, there should be nothing to prevent hundreds of flyers being ordinary features of the landscape before the end of the year. As each pupil becomes proficient, and in his turn imparts his skill to others, the spread of aviation must necessarily be very rapid.

Both aviators will shortly be removing their scene of action to the new flying ground at Napoule, near Cannes, where aerodocks have been erected by the Compagnie L'Aigle, as well as a starting derrick.

Progress at Chalons.

HENRY FARMAN is busy at Bouy, assisted by his mechanic, Maurice Herbster, in getting ready his new machine, which it will be remembered is to be fitted with a 50-h.p. Vivinus motor. It is likely to be ready for flight in another ten days or so. Captain Burgeart hopes to be in the air shortly, and the Antoinette monoplane of Mr. Hubert Latham has been successfully repaired after his recent mishap. M. Rene Demanest, assisted by M. Levavasseur, is also experimenting on the camp grounds with an Antoinette. With the return of fine weather, some busy days may therefore be anticipated at Chalons.

Another Flyer from Dayton, O.

IF the report before us is correct, it would seem as though Dayton, O., will not only be famous in history as the home of the Wright Brothers, for another inhabitant, by name W. J. Richardson, is said to have produced a flying machine which promises to eclipse the Wright aeroplane. No details are available as to the machine except that it is designed on novel and original lines, but it is said to have recently risen to a height of over 100 ft. without artificial aid and remained aloft for 38 mins., during which it was said to be under perfect control.

Aero Club de France.

FOR the current year, the following have been elected to the Committee and to fill the various offices: President, M. L. P. Cailletet; Vice-Presidents, MM. Comte Henry de la Vaulx, Jacques Balsan, and Leon Barthou; Committee, MM. Rene Grosdidier,



Medals presented by the Aero Club of America to Orville and Wilbur Wright in recognition of the splendid practical work done by them in advancing the science of flight.

Deutsch de la Meurthe, Abel Ballif, Henri Menier, Louis Bleriot; General Secretary, M. Georges Besancen; Treasurer, Comte de Castillon de Saint Victor.

Affiliation of French automobile clubs, which have created aero sections, can now be effected, subject to the clubs being already affiliated to the Automobile Club de France.

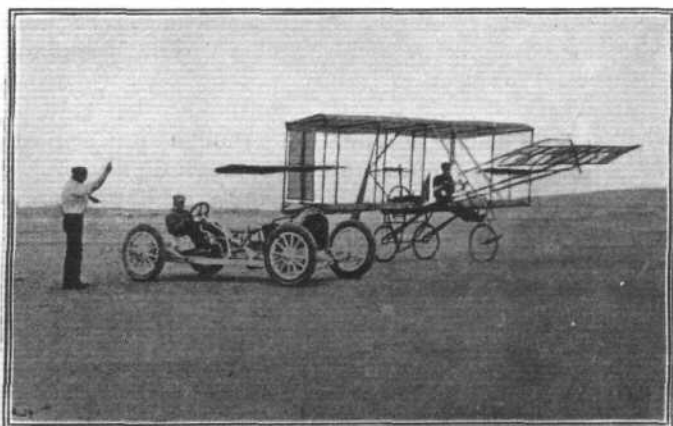
An Italian Mixed Aero Commission.

It has been decided to link up the various aeronautical interests which are claimed to exist in certain associations by the foundation, as in France, of a "Commission Aérienne Mixte." This will comprise four members each from the following bodies:—The Aeronautical Society of Italy (Rome), the Aviation Society of Milan, Automobile Club of Italy, and the Touring Club of Italy. Prince Scipion Borghese is the President of this Commission.

Blessing Aerodromes and Aeroplanes.

LAST week we referred to the innovation of blessing the new aerodrome at Juvisy and the two Delagrangre aeroplanes there. We now give in our frontispiece a couple of photographs illustrating this curious ceremony. It will be seen that a sort of grand stand was erected for the occasion, and to the front of this the two aeroplanes were brought. The service was commenced by Mgr. Amette, the Archbishop of Paris, delivering an address, in the course of which he said that man by his original fall lost the sovereignty of the air, but the present inventions permit it to be hoped that man may be allowed by Divine grace to regain some small fragment of his original sovereignty. The Church was therefore happy to bless the machines, destined to soar through space and conquer realms hitherto beyond man's domination.

Short prayers were then uttered that those using the aeroplanes might be preserved from accident, after which one of the aeroplanes was named "Ile de France," by Baroness Lagatinerie, and the other "Alsace," by Madame Dussand, and sprinkling them with holy water, the Archbishop blessed them. At this moment a change came over the heavens, and, as if in sympathy with the Archbishop's movements, rain fell in torrents, causing the "godmothers" and the assistants to flee for shelter. About five hundred people witnessed the ceremony, including the Duke and Duchess of Rohan, Princess Murat, Prince and Princess Leon, Marquis and Marchioness of Castellane, Marquis and Marchioness of Puybaudet, &c.



The Bates Aeroplane and a motor car lined up on Daytona Beach for the start of a "race" between them. No details as to the result have, as yet, come to hand.

The Future of the "Silver Dart."

INTERVIEWED concerning a report that the "Silver Dart" had been purchased by the American Government, Dr. Graham Bell said nothing definite regarding the future of the aeroplane had been decided upon. He said, however, that the Aerial Experiment Association had been dissolved, and that Mr. McCurdy and Mr. Baldwin would build machines in Canada, while Mr. Curtiss will build at Hammondsport, New York. It is said that an official of the British Government is expected in Nova Scotia shortly to negotiate for the purchase of the "Silver Dart" patent.

"Zeppelin I" Returns to Friedrichshafen.

LAST week's *Flight* recorded the exciting adventure which happened to the "Zeppelin I," after its arrival at Munich. On Friday, April 2nd, after riding out the night safely near Dingolfing, the airship ascended again, and proceeding to Munich was able to complete the original intention, and descended safely at the Oberwiesenufeld. There Count Zeppelin was greeted by the Prince Regent, who entertained the Count and his companions to lunch and decorated them with orders.

Shortly after 3.30 p.m. the airship ascended again, and was headed in the direction of Friedrichshafen, which was reached without incident about four hours later. Throughout Germany this voyage of the airship has created a wonderful impression, and the military had a great deal of trouble to control the enormous enthusiastic crowds which gathered to see the airship come to earth. At Dingolfing, although the weather was cold and stormy, large numbers of people watched the airship throughout the night.

Long Trial of "Zeppelin I."

AT nine o'clock on Monday morning "Zeppelin I" ascended at Friedrichshafen, in charge of Major Sperling, Count Zeppelin not being on board, with the object of carrying out the oft-postponed twenty-four-hour trial. In the face of a fairly strong wind, a course was set in the direction of Stuttgart, but the wind increasing in force, Major Sperling deemed it expedient to return, and came down at Friedrichshafen, after a voyage of about nine hours. In less than an hour, however, the airship re-ascended with the object of continuing the trial, but only remained aloft for about an hour.

A Night Flight of Zeppelin.

AFTER a series of manoeuvring flights had been carried out over Lake Constance during Tuesday afternoon, the "Zeppelin I" started off at 9.40 p.m. with the object of carrying out a secret flight of about 20 hours. The night was clear and cool, with the moon shining brightly, while a moderate wind was blowing from the west.

Airships in German Army Manœuvres.

FOLLOWING close upon these achievements of "Zeppelin I," comes the announcement that it will be actively engaged in the manœuvres which are to take place on the borders of Wurtemberg and Bavaria at the end of August. It will be attached to the Bavarian-Wurtemberg Corps, under the command of Prince Leopold of Bavaria, and probably the Gross and Parseval airships will be engaged on the other side. Also, according to the *Daily Telegraph*, the new artillery specially designed for combating airships will be used against "Zeppelin I."

"Zeppelin I" now "S.M.S."

As is the custom in the Navy, the German military authorities have decided to prefix to the names of the military airships the letters S.M.S. (Seiner Majestät Schiff), the equivalent of H.M.S. as used in this country.

New English Prizes.

FROM the official notices of the Aero Club it will be seen that seven new prizes are being offered by that body for distance flights at their flying ground at Shellbeach. They consist of four prizes of £25 each to be awarded to the first four aviators who fly 250 yards, and three prizes of £50 each for the first three aviators to fly one mile in a closed circuit.

The Kimball Aeroplane.

AMONG the many aeroplanes which are being built in the United States, a very interesting one is the Kimball biplane. The two main planes are of 37 ft. spread, have a depth of 6½ ft., and are placed 4 ft. 2 ins. apart. There is a biplane elevator in front, but no rear rudder, although at the ends of the two main planes are controllable extensions measuring 4 ft. by 4 ft. At each end the rear edges of the main planes are connected by a shutter of the Venetian blind type, which can be manipulated by the aviator for steering purposes. The aeroplane is to be propelled by eight large propellers placed between the planes and driven by an endless steel cable, the power being furnished by a 40-h.p. two-cycle engine.

For Aerial Visitors to New York.

AVIATORS who use their machines over and around New York in the future will be "high-fliers" indeed, and it is announced that a station is being arranged for them on the roof of the Hotel Aster. The cost is said to be £20,000, and the equipment will include gas tanks from which dirigibles will be able to replenish their balloons.

Flying Grounds and Scientific Tests.

IN the selection of suitable grounds for flight experiments, the Aero Club de France recommend that a straight flight of at least 2 kiloms. is desirable. The Club also propose installing a mono-rail arrangement, on which a truck, connected electrically, is to be mounted for the purpose of testing, under scientific conditions, propellers and planes.



A LECTURE

THAT there is a good deal of interest taken in flight in provincial centres was shown at a lecture given in the Central Hall, Lincoln, on March 30th, by Mr. C. E. Wright, M.A. The chair was taken by the Mayor, and although the audience was not very large, it made up for this in enthusiasm. In a not-too technical manner, the lecturer reviewed the early history of man's attempt to master the air, and the performances of the Wrights and other foremost flyers of the present day were dealt with. Perhaps the most interesting part of the programme was a series of elementary experiments to illustrate various points. Mounting a high pair of steps, the lecturer launched his first model airship—a light plane that sailed gaily half the length of the hall amid warm appreciation. Similarly he floated from his summit a series of strips of paper, variously weighted, demonstrating very easily the balancing and counterbalancing effects of each. Miniature

A. Brussels Aviation Syndicate.

THE Union Syndicale of Brussels has created a new body, the "Chambre des Locomotions Aeriennes," which already numbers 60 members. M. A. Vlemincx is President, Count Jacques de Liedekerke and M. A. de la Hault Vice-Presidents, and M. C. Fondu Secretary.

The Dynamics of Flight, Illustrated.

AMONG the forthcoming papers to be read before the Institution of Automobile Engineers is one by Mr. F. W. Lanchester on "The Dynamics of Flight" (experimentally illustrated). It will be read at the Institution of Civil Engineers, Great George Street, Westminster, on April 28th.

Aeroplane Competition at Santander.

SANTANDER, which will shortly boast a Royal palace, is anxious to make its annual regatta, which King Alfonso usually attends, as attractive as possible, and is therefore organising a series of aeroplane competitions to take place about the same time as the yacht racing in August or September. Valuable prizes, including one of £1,500 and two of £200, will be offered.

Douai Meeting.

THE L.N.A. section at Douai announce that an aviation meeting is to be held at their aerodrome from June 28th to July 18th. 20,000 francs have been voted to assist the organisation by the Douai municipality.

Airship-Building at Moisson.

Two of the airships which are in hand by M. Henri Julliot and M. Georges Juchmes at Moisson will, in all likelihood, be completed early in June. The "Libert," a new leviathan for the French Army, is to be finished early in May, and the other, ordered by the Russian Government, is to follow in June.

Frankfort Exhibition.

APPARENTLY in contradistinction to the Paris and London Aero Show, that at Frankfort next July will be largely an exhibition of dirigibles, for it is announced that already arrangements have been made to stage nine of these vessels, including the Zeppelin, Parseval, Schutte, Durkopp, Siemens-Schuckert, Koeln, and Harburg craft. These will represent both the rigid and semi-rigid type of airships. There will also be exhibits of heavier-than-air machines, but nothing definite seems to have been secured in this direction yet.



AT LINCOLN.

ships of mica and celluloid were sent flying across the hall to show the difference in effect between vessels of straight and curved fins.

One of them that soared a full fifty feet had a particularly graceful motion, and though it narrowly missed the head of an important corporation official it was given a generous meed of applause. Other gliders helped the lecturer to show a path of an undulating kind as pre-ordained for some of these vessels, and a further one, an aeroplane that actually had the talent of looping the loop. The features of the Wright aeroplane were explained by diagrams, and a model of the aeroplane flown by Farman and Delagrange was sent off from the step ladder with great success.

Some of the audience were so interested that they stayed behind after the lecture, and asked Mr. Wright to conduct more experiments and explain them.

THE AWAKENING OF PUBLIC OPINION.

SOME VIEWS EXPRESSED BY PROMINENT MEN AND LEADING NEWSPAPERS.

MANY significant statements have been uttered during the passing week as a direct result of the important meeting convened by the Lord Mayor at the Mansion House on Monday. Several of the speakers who supported the Aerial League on that occasion, and many of the editorial writers in the British daily Press, have—effectively, it is to be hoped—driven home the crying need that there is for the people and the Government to bestir themselves in the encouragement of aeronautic progress within these islands. Not a few of these utterances may find a fitting place in *FLIGHT*, if only by way of permanent record, and hence we append herewith a striking selection of them:—

The Lord Mayor.

I confess that at first I was rather doubtful as to the value of airships, and, like many other people, could hardly conceive that in the thin and invisible air around and above us ships could be made to float which would be a menace to us if they belonged to an enemy and which would be our safeguard if they were our own. But wonderful things were happening every day. Indeed, the navigation of the air has become a reality.

We have taught the world how to navigate the seas, we have shown them how to build ships, and we must not now admit ourselves beaten in building or navigating airships.

The only airship to hang over the Bank of England or the Mansion House must be one flying the Union Jack.

Prince Louis of Battenberg.

It is time we woke up, seeing what is being done on the Continent.

Bishop Welldon.

Aerial navigation is fraught with possibilities which no patriotic Englishman can disregard.

Lord Curzon.

I am glad to think that responsible persons are turning their attention seriously to the position occupied by the country in respect to aerial navigation. That position, it cannot be denied, is a backward and, to that extent, a discreditable one.

The maritime frontiers possessed by this country should make aerial navigation a matter of almost vital significance for us; as a means of communication or as an instrument of war it will admit of development in which nations as well as individuals will compete.

Mr. Stephen A. Marples.

England will have to strain every nerve if she wishes to make up the enormous leeway that she has already lost. The League is not an association of scaremongers. It prefers to attain its objects by an aggressive propaganda conducted in a businesslike manner, rather than by the adoption of an alarmist programme. It will be the rôle of the League to teach the nation that in order to think Imperially, we must at once begin to think aerially.

Lord Montagu.

I am convinced that unless public opinion is aroused on this question we shall have to regret bitterly a few years hence not having taken measures to provide ourselves with weapons of offence and defence in the air.

Vice-Admiral Sir Percy Scott.

Aerial ships will come over in the dark, and I have not yet met any gunnery person who could teach me how to hit an object that one cannot see. The only defence, it seems to me, that we have against these flying machines will be to meet them with flying machines.

We ought to proceed at once to form a two-power standard in airships.

Dr. Hele-Shaw.

The building of airships must be undertaken by the Government. It is a costly work, and we cannot rely on private enterprise alone to place us in the position that we should occupy with regard to airships.

The Times.

Nothing could be better calculated to impress the public with the idea that the whole thing is a farce than the perfectly futile manner in which dribbles of money are expended at Farnborough.

No one who rightly understands the significance of what has been done by Count Zeppelin in Germany, and by numerous experimenters with aeroplanes in France and other countries, can fail to see that quite a moderate advance upon the present achievements would suffice to impose very grave disadvantages upon any nation that had failed to supply itself with an efficient aerial fleet.

With all these possibilities ready at very short notice to become actualities, this country is doing nothing worth naming to meet the danger. Probably we shall again be told that the Government policy is one of masterly inactivity combined with economy, and that, when we have seen the best that other nations can do, we shall be better able to begin doing something for ourselves. It is a beautiful policy for dreamers; but, if we follow it a little longer, we may be compelled to practice further economy by not having the chance to build airships at all.

The Daily Telegraph.

Our scientists have not received the same official encouragement, and the recent advances made in the building of aeroplanes and dirigible airships are all associated with the names of foreigners.

The question now is not the conquest of the sky, but which nation shall secure its sovereignty. The former was a scientific problem merely; the latter is a national one, and it behoves this country to wake up at once, and become alive to the facts of the situation.

If a new order of things has come to the birth, then we must make what haste we can, and take up seriously and strenuously the study and practice of aeronautics.

Great Britain must at once set about building an aerial navy.

Though there is no need for scare, there is abundant need of careful preparation, and we cannot suppose that the British Government will require much pressure to induce them to increase the paltry sum of £19,000 which was set aside in the Army Estimates for aerial experiments. It is manifestly inadequate, in view of the Zeppelin successes, and the enormous importance attached to these airships by the German military authorities. No Englishman can read the telegrams from Friedrichshafen without feeling a keen sense of patriotic regret that we have nothing similar to show in this country, and without the conviction that our neighbours are getting a very long and, unless we at once bestir ourselves, a very dangerous lead.

The Morning Post.

We hope that the meeting organised at the Mansion House by the Aerial League of the British Empire will help to arouse the people of this country to the need of active and sustained effort in connection with the navigation of the air.

It is curious that hitherto the nation has played such a small part in the movement, and has regarded it with comparative apathy and indifference.

Whether as a means of communication or as an instrument of warfare, aviation seems destined to make a rapid advance, and the nation that takes the lead in this new form of locomotion may find itself in a position of overwhelming superiority over its neighbours.

The English nation must devote serious efforts to investigation and experiment in both fields, and the Government must be ready to construct in sufficient numbers such airships as are found adapted for naval and military operations.

Reliance must not be placed on Government action alone. Private enterprise can serve both to guide and spur official effort, and the activity of the War Office and Admiralty will be stimulated by the influence of public opinion.

The Daily Graphic.

When Zeppelin airships take an appointed place in German military manoeuvres, it is time for the most lethargic intellect to speculate on the part which aeronautics may play in future problems of national defence.

While we have every sympathy with any attempt to encourage the solution of the problems of flight, and though we are certain that the public mind would be better occupied in considering aeroplanes than professional football, we are by no means certain that the formation of public opinion on these points is a necessity.

We are an intensely practical nation, and it is, perhaps, our national failing that we like to see results before we pledge either our interest or our purses. If the English aeronauts would show us

something better than the "Nulli Secundus," or that faithful failure, the Aldershot aeroplane, no Mansion House meetings would be required to stir enthusiasm.

The Birmingham Daily Post.

We hope that the Mansion House meeting of the Aerial League will fulfil its purpose—that is to say, will help to convince the people of Great Britain that they are very backward in the new science of aerial navigation, and that their apathy, if it is not ended at once, may prove a source of real national danger.



DIRIGIBLES IN PARLIAMENT.

ON Tuesday, in reply to a series of questions by Mr. Fell, Mr. Haldane, the Secretary for War, stated that from the information at his disposal it appears that the French Government propose to have five Government shelters for dirigible balloons. The construction of a new shed for a dirigible at Aldershot, in addition to the existing shed, is under consideration. With regard to airship stations on the East Coast, he could only say that the question was being very carefully considered.

As to the German Government, Mr. Haldane said they were reported to have built six dirigibles, and to be building six more. Sheds for dirigibles had been erected at Friedrichshafen (2), Wilhelmshafen, Manzell, Griesheim (near Frankfort), and Reinickendorf, while there were military airship stations at Berlin (Tegel), Metz, Cologne, Darmstadt, Lyck, and Reinickendorf (2). Of these, only one—that at Berlin—is reported to be built. In addition, a private company has been formed for constructing stations on certain main lines of communication, but, so far as is known, no steps have been taken to commence any of them.

The responsibility of designing and building up the aerial fleets of the future cannot properly be left to independent private enterprise. The day for that policy of *laissez faire* is past.

If British interests are to be adequately safeguarded, we must be ready to take advantage of every such development if and when the need comes.

It is upon the Government that the responsibility lies, for the probable financial returns from ingenuity devoted to flying-machine development are still too small to induce many men of talent to devote themselves to that work in the hope of winning fortune from it.

Sir R. Hobart asked whether facilities would be given for members of the House of Commons to inspect the balloon factory during the Easter recess, and see what was going on, but Mr. Haldane thought they had much better not.



CORRESPONDENCE.

* * The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

AERONAUTICAL INSTITUTE AND CLUB.

To the Editor of FLIGHT.

SIR,—At a minor meeting of the above Society, it was decided to resume the general meetings at St. Bride's Institute, the date of which will be duly announced.

This Society was founded in 1901 at the Society of Arts with the object of mutual advancement of aviation in England, and that it has accomplished sterling work may be judged from the fact that it has held many important meetings, in which Kress and Chanute have lectured. An instructive and interesting International Exhibition was held at the Alexandra Palace in November, 1903; medals were given, and Mr. P. Y. Alexandra cordially assisted to enhance success.

Papers will be read, models shown, and members who are constructing full-sized machines will describe their investigations. Club grounds with accommodation and exhibition facilities are rapidly being pushed forward, whilst a "glider" will be at the use of members to secure initial experience in the air. Balloon ascents have already been attained by the Club for members, but dynamic flight will be exclusively dealt with in future.

Those desiring to attend the meetings are requested to communicate immediately with

29, Stayton Street, Chelsea.

P. L. SENEAL.

THE SUBJUGATION OF THE AIR.

To the Editor of FLIGHT.

SIR,—Apparently Mr. Wilson considers all those who agree with him as broad-minded and sensible, and those who differ from him the reverse; however this may be, he does not justify his former statement that the aeroplane is unscientific, monstrous, incomplete, and dangerous. Why monstrous?

Yours faithfully,

E. C. DWYER.

MR. JACK HUMPHRY'S FLYER.

To the Editor of FLIGHT.

SIR,—Mr. Humphry has instructed me to say that he knows of no better medium than your admirable paper for expressing his regret at being unable to exhibit at the recent Show at Olympia, owing to the entrance archway there being too small to admit the aeroplane.

He hopes to have photographs and information ready for press shortly, and will communicate with you again.

Yours faithfully,

April 6th.

HADDON BALL, Secretary.

EARLY FLYING MACHINES.

To the Editor of FLIGHT.

SIR,—Among the instances in which flying machines are reported to have been successful I have not seen the following account noticed:—

A learned Jesuit missionary of the name of Grimaldi who came from Civita Vecchia, and who had been many years in India, is said to have invented a machine for flying.

It was in the form of an eagle, and by its aid he was able to fly from Calais, across the Channel, to Dover. This feat he is said to have performed in 1751, taking one hour.

The incident is mentioned by Charles Hopf in the German *Encyclopædia of Arts and Sciences*, edited by Ersch and Gruber, Leipzig, Brockhaus, 1871, p. 156. I have read the same account in the biographical dictionary of learned Jesuits.

Yours truly,
D. J.

Herne Hill.



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NOTICE.—Advertisement instructions should reach the office, 44, St. Martin's Lane, W.C., by first post, Thursday. The latest time for receiving small alterations for Advertisements is 12 noon, Thursday. No alterations can be made after that hour.